



ELSEVIER

Diamond and Related Materials, 4 (1995) 1389–1393

**DIAMOND
AND
RELATED
MATERIALS**

Author Index for Volume 4

Abello, L., 745, 1243
Abgarowicz, E., 234
Abraham, S., 261
Achete, C.A., 499
Aguiar, R., 337, 657, 780
Ahn, J., 95
Aizawa, T., 600
Alers, P., 1137
Al-Assadi, K.F., 324
Alexandrov, A.F., 1142
Alkemade, P.F.A., 775
Allen, M., 852, 857
Amaratunga, G.A.J., 637, 912, 977
Anděra, V., 917
Ando, T., 59, 520, 600, 607
Andújar, J.L., 657, 702, 1205
Anger, E., 759
Angerer, H., 632
Anthony, T.R., 83, 1346
Anttila, A., 1329
Ascarelli, P., 464, 628
Ashfold, M.N.R., 770, 794
Aubreton, J., 309
Avigal, I., 318
Avigal, Y., 765
Avyigal, Y., 1079
Ariosa, D., 1137
Ayres, C.F., 632

Babaev, V.G., 968, 1142, 1200
Babina, V.M., 968
Bachmann, P.K., 645, 820
Badzian, A., 1371
Badzian, T., 1371
Baer, Y., 1137
Baik, Y.-J., 989
Bakon, A., 234
Bakunin, O.M., 1020
Baldwin, K.J., 617
Balk, L.J., 645
Baranauskas, V., 1255
Baranov, A.M., 109
Barholm-Hansen, C., 787
Barrat, S., 419
Barzen, I., 288
Bastl, Z., 917
Batchelder, D.N., 617
Bauer-Grosse, E., 419
Baumann, P.K., 802
Baur, T., 553
Bec, S., 309
Beckman, J., 735
Beckmann, R., 256, 401
Beetz, C.P., 586
Belous, V.A., 964
Benndorf, C., 346, 724

Bentzon, M.D., 787
Beny, C., 207
Bergmaier, A., 478, 591
Berrettoni, M., 488
Bertran, E., 657, 702, 1205
Bhat, D.G., 921
Bindslev Hansen, J., 787
Bizukov, A.A., 120
Blank, E., 972
Blatter, A., 1009
Blyabin, A.A., 1354
Boero, M., 517
Bögli, U., 1009
Böhml, V., 33
Bohr, S., 133, 714
Bojko, V.S., 791
Bonnot, A.M., 750
Borges, C.F.M., 149
Borst, T., 661
Borst, T.H., 948
Bosch, A., 657
Bou, P., 207
Bounouh, Y., 492, 897
Bozhko, A., 488
Brandes, G.R., 586
Braun, M., 936
Bregadze, A.Y., 1200
Brener, R., 292, 765
Brenn, R., 304, 503
Brown, D.W., 435
Brown, W.D., 921
Brunet, F., 1243
Brusa, R.S., 499
Bruyère, J.C., 596
Buck, M., 544
Buck, V., 33
Buckley-Golder, I.M., 632
Buhaenko, D.S., 406
Bull, S.J., 43, 827
Burger, J., 1009
Burton, N.C., 1222
Bustarret, E., 684
Butler, J.E., 1222
Butter, R., 852, 857
Buuron, A.J.M., 908, 1271
Bzenič, S.A., 1103

Campargue, A., 350
Cao, G.Z., 775
Cappelli, E., 464, 628
Cardinaud, C., 492, 897
Carlsson, J.-O., 155
Catherinot, A., 309
Celis, J.-P., 1267
Cernogora, J., 492
Chahed, L., 492

Chalker, P.R., 43, 632
Chandra, L., 852, 857
Chattopadhyay, K.K., 122
Chaudhuri, S., 122
Chawla, K., 128
Chen, C., 1371
Chen, C.-F., 451
Chen, K.H., 460
Chen, L.C., 460
Chen, S.H., 451
Chenevier, M., 350
Cherian, K.A., 20
Cherry, R.I., 524
Cheshire, R., 324
Christmann, P., 53
Chu, C.J., 1311
Chua, L.H., 740
Chudinov, S., 488
Chuzhko, R.K., 314
Cifre, J., 337, 780, 798
Clausing, R.E., 261
Clay, K.J., 977
Clyne, T.W., 852
Collocott, S.J., 912
Coltrin, M.E., 1000
Cooper, C.V., 43
Crovini, G., 473
Corat, E.J., 1255
Couvrat, P., 1251
Cubertafon, J.C., 350
Cytermann, C., 292

Dandy, D.S., 1000, 1173
Davis, C.A., 441
De Cesare, G., 628
De Martino, C., 361, 996, 1210
Deák, P., 706
DebRoy, T., 69
Deguchi, M., 575
Dekempeneer, E., 366
Della Mea, G., 357
Demazeau, G., 284
Demichelis, F., 357, 361, 473, 996, 1210
Deneuville, A., 596, 673, 684
Deng, J., 936
Denis, M., 1251
Denisenko, A.V., 877
Deutschmann, S., 930
DeVore, C.R., 1277
deVries, J.E., 220
deVries, R.C., 1093
Dhamelincourt, D., 10
Dirnfeld, S., 1079
Döbele, H.F., 324
Dollinger, G., 478, 591
Donnelly, K., 324

Dorfman, V., 488
 Dorsch, O., 456, 873
 Dötter, W., 469
 Dowling, D.P., 324
 Downing, R.G., 666
 Dreifus, D.L., 622
 Drummond, I.C., 445
 Dub, S.N., 5
 Dutta, J., 122
 Dworschak, W., 478

Ebert, W., 661
 Ece, M., 720
 Ecelberger, S.A., 1289
 Efremow, N.N., 76
 Ehrhardt, H., 268, 288, 304, 333, 469, 478,
 559, 706
 Eimori, N., 806
 Elinson, V.M., 109
 Elkaseh, A., 381
 Ellis, P.J., 406
 Elst, W.A.L.M., 1113
 Engemann, J., 563
 Ernst, K.-H., 482, 720
 Erz, R., 469
 Esteve, J., 337, 780, 798
 Eun, K.Y., 989
 Evans, P.J., 765
 Everitt, N.M., 730, 770, 794

Faestermann, T., 478
 Fahrner, W.R., 877
 Fave, J.-L., 492
 Fayer, A., 1079
 Fayette, L., 745, 1243
 Fedorov, V.V., 314
 Fedoseev, D.V., 314
 Feger, C.A., 586
 Fernández, J.L., 657, 702, 1205
 Findeling-Dufour, C., 429
 Fizzorri, F., 517
 Flöter, A., 930
 Fontaine, F., 596, 673, 684
 Fontaine, M., 996
 Foord, J.S., 735, 740
 Fournier, D., 809, 820
 Fox, B.A., 622
 Fox, C., 1000
 Francz, G., 539
 Freedman, A., 216
 Freire, Jr., F.L., 499
 Frey, C.M., 478, 591
 Friedrich, M., 944
 Frischholz, M., 692
 Fuchs, F., 652, 678
 Fukunaga, O., 1319
 Furukawa, A., 984

Gali, A., 706
 Galluzzi, F., 628
 Gan, Z.P., 1260
 Gangal, S.A., 15
 Garden, J., 1243
 Garnev, I., 1041
 Gavrilov, A.V., 1354
 Gavrilov, N.V., 1020
 Geddes, J., 445

Geier, S., 410
 Geis, M.W., 76
 Geller, H., 292
 Gerber, J., 333; 559
 Germain, C., 309
 Germi, P., 1243
 Gerster, J., 1189
 Gheeraert, E., 596, 684
 Gheorghiu, A., 897
 Gicquel, A., 149, 429, 759
 Gielen, J.W.A.M., 328, 908
 Giessen, T., 333
 Giling, L.J., 250, 775, 1025, 1113
 Gimeno, S., 657
 Giorgis, F., 357, 473
 Girault, C., 309
 Gnaser, H., 563
 Golzan, M.M., 912
 Gonon, P., 678
 Gorodetsky, A.E., 1383
 Gorpichenko, S.D., 1020
 Goudeau, Ph., 1334
 Gouzman, I., 292
 Graebner, J.E., 1196
 Graham, W.G., 324
 Gray, K.J., 837
 Griesmeier, U., 666
 Grill, A., 62
 Gross, M., 666
 Grossman, E., 318, 569
 Grotjohn, T.A., 1145
 Guseva, M.B., 968, 1142, 1200
 Gylina, V.I., 120

Hagemann, H.J., 820
 Hakovirta, M., 1329
 Hammerschmidt, A., 692, 954
 Hänni, W., 1137
 Hartsell, M.L., 622
 Hatta, A., 575, 806
 Hatynenko, N.G., 113
 Haubner, R., 133, 714
 Hauert, R., 482
 Hauge, R.H., 1311
 Hayward, I.P., 617
 Heatherly, L., 261
 Heggie, M.I., 528
 Heiderhoff, R., 563, 645
 Helbig, R., 692
 Henard, R.B., 622
 Henderson, C.R., 730, 770
 Herbin, R., 207
 Hessmer, R., 410, 416
 Higgins, D.P., 445
 Hinneberg, H.-J., 930, 944
 Hintermann, H.E., 1009
 Hinze, E., 1050
 Hiraki, A., 575, 806
 Hirao, T., 575
 Hirata, A., 1357
 Hirvonen, J.-P., 843
 Hishita, S., 520
 Hoffman, A., 292, 765, 1079
 Hofmann, D.M., 53
 Hofsäss, H.C., 666
 Holly, S., 76
 Holmes, J.S., 622

Holt, L., 794
 Hora, H., 1376
 Hoshina, K., 903
 Hsu, W.L., 1000
 Huang, C.Y., 460
 Huang, L.J., 1353
 Hug, G., 200
 Hunn, J.D., 261
 Hunter, D.M., 617
 Hurler, W., 954

Ishii, M., 607
 Ishikawa, M., 1056
 Ito, T., 575, 806
 Ivanov, A., 488

Jackman, R.B., 735, 740
 Jacobs, R., 366
 Janssen, G., 250, 1025
 Jaouen, M., 200
 Jelenak, A., 1103, 1126
 Joeris, P., 724
 Johansson, E., 155
 John, P., 169, 394, 445
 Johnson, D.G., 921
 Johnston, C., 43, 632
 Jones, A.C., 632
 Jovanović, J.V., 1103
 Jubber, M.G., 169, 394, 445
 Jung, K., 268, 288, 304, 333, 469, 559
 Junqua, N., 200

Kalish, R., 318, 569, 1079
 Kamo, M., 59, 520, 600, 607
 Kandidov, A.V., 1354
 Kania, P., 425
 Kao, C.-T., 622
 Karpman, J., 10
 Kassing, R., 272
 Kelly, T.C., 324
 Kenny, M., 292
 Khasawinah, S., 877
 Khomich, A.V., 1061
 Khots, G.E., 120
 Khvostov, V.V., 1142, 1200
 Kimura, T., 903
 Kistenmacher, T.J., 1289
 Kitabatake, M., 575
 Kiyota, H., 59
 Klepikov, A.V., 314
 Klotzbücher, T., 370
 Kohn, E., 661
 Koidl, P., 503, 652, 678
 Komath, M., 15, 20
 Kondrashov, P.E., 109
 Konov, V.I., 754, 1073
 Kornas, V., 324
 Korotoushenko, K.G., 754
 Korotoushenko, K.G., 893
 Korshunov, L.G., 1020
 Koshinski, P., 645
 Koskinen, J., 843
 Kreutz, E.W., 370
 Krivenko, L.F., 791
 Krötz, G., 632
 Kuang, Y., 1371
 Kudryavtsev, Yu.P., 1142

Kuhr, M., 272, 375, 401
 Kulik, J., 318
 Kulikovsky, V.Yu., 113
 Kulisch, W., 256, 272, 375, 401
 Kulkarni, S.K., 15, 20
 Kumar, S., 69
 Kunstmann, T., 632
 Küttel, O.M., 612
 Kuypers, S., 366

Lade, H., 820
 Lahres, M., 1216
 Lai, Y.L., 460
 Laikhtman, A., 765
 Lakhotkin, Yu.V., 754
 Lamaze, G.P., 666
 Langer, M., 1251
 Lappalainen, R., 843, 1329
 Latham, C.D., 528
 Lau, W.M., 1347
 Laufer, S., 930
 Layet, J.M., 996
 Lee, S.-T., 1347
 Lee, N., 1371
 Lee, W.-S., 989
 Leers, D., 820
 Leese, A.B., 632
 Legner, W., 632
 Leijala, A., 1009
 Leite, N.F., 1255
 Lempert, G.D., 318
 Lettington, A.H., 852, 857
 Levin, L., 292
 Ley, L., 508
 Li, H.D., 1260
 Li, H.Q., 1260
 Liehr, M., 394, 445
 Liesenfeld, M., 33
 Lifshitz, Y., 318, 569
 Lilov, S.K., 1325
 Limmer, W., 1189
 Lin, J.C., 460
 Liu, H., 1173
 Liu, H.F., 1260
 Locher, R., 678
 Lorenz, H., 1046, 1050
 Lorenz, H.P., 1088
 Loubnin, E.N., 754, 893, 1009, 1073
 Lousa, A., 657, 798
 Lowther, J.E., 145
 Lu, G., 794, 848
 Lubnin, E.N., 314
 Lucazeau, E., 596
 Lucazeau, G., 745, 1243
 Luithardt, W., 346
 Lux, B., 133, 714

Ma, Y., 1319
 Maier, M., 678
 Maillat, M., 1009
 Mainz, B., 930, 944
 Malogolovets, V.G., 5
 Malshe, A.P., 921
 Malta, D.M., 622
 Mandel, Th., 692
 Manfredotti, C., 517
 Mankelevich, Y.A., 1065

Manola, S.S., 1103
 Marciniak, J., 1251
 Marcus, B., 745, 1243
 Margrave, J.L., 1311
 Marinin, V.G., 791
 Marinkovic, S., 186
 Mariotto, G., 499
 Martelli, S., 464
 Marton, D., 318
 Maslyuk, B.A., 5
 Mattei, G., 464
 May, P.W., 730, 770, 794, 848
 Maywald, M., 645
 McCullough, R.W., 445
 McCune, R.C., 220
 McGrath, J.L., 445
 McHargue, C.J., 261
 McKenzie, D.R., 637, 912
 McMaster, M.C., 1000
 Meaden, G.M., 1222
 Melnikov, A.A., 877
 Meneve, J., 366
 Mermoux, M., 745, 1243
 Metev, S.M., 1073
 Meyer, B.K., 53
 Michalski, A., 1131
 Mikhailov, S.N., 1137
 Miller, D.J., 912
 Miller, J.B., 435
 Milne, D.K., 169, 394, 445
 Milne, W.I., 637
 Mitrović, M.M., 1126
 Mitura, A., 302
 Mitura, E., 302
 Mitura, S., 302, 1131, 1251
 Miyao, Y., 1069
 Miyatani, K., 342
 Mizgulin, V.N., 1020
 Mohrbacher, H., 1267
 Moisan, M., 149
 Morenza, J.L., 337
 Mori, Y., 575, 806
 Morley, S., 944
 Morrow, T., 324
 Moscati, G., 1069
 Moulin, S., 750
 Muftah, M., 386
 Müller, G., 632
 Müller, U., 482
 Müller-Hummel, P., 1216
 Müller-Sebert, W., 503
 Münzinger, P.C., 958, 1189
 Mutsukura, N., 342

Nachal'naya, T.A., 5
 Nadolinny, V.A., 177
 Nakai, H., 903
 Naseem, H., 921
 Naubert, T., 33
 Nechaev, A.A., 1020
 Nemanich, R.J., 802
 Nesládek, M., 697
 Ng, K.Y.S., 220
 Niedbalska, A., 234
 Niedzielski, P., 1251
 Nikitina, I.P., 784

Nikolaev, A.E., 784
 Novikov, N.V., 390

Obermeier, E., 456, 873
 Obraztsov, A.N., 968, 1200
 Obraztsova, E.D., 754, 964, 1009, 1073
 O'Brien, T.P., 324
 Oelhafen, P., 425, 539
 Ohashi, N., 59
 O'Leary, A., 324
 Olszyna, A., 386, 1131
 Oral, B., 482, 720
 Orgzall, I., 1046, 1050
 Orlinov, V., 1041
 Ostapenko, I.L., 791
 Osterwalder, J., 612
 Osuch, K., 532
 Otorbaev, D.K., 908, 1271

Padmanabhan, K.R., 128
 Pal, A.K., 122
 Palau, J., 337
 Pan, C., 1311
 Parmeter, J.E., 191
 Partridge, P.G., 794, 848
 Pascual, E., 657, 702, 1205
 Patel, V., 62
 Patrini, M., 996
 Patscheider, J., 720
 Peña, A.F.V., 1255
 Peng, X.L., 1260
 Pereira, E., 26, 53, 688
 Pereira, L., 53
 Pereverzev, V.G., 754
 Pernet, M., 1243
 Perov, P.I., 1061
 Petrović, Z.Lj., 1103, 1126
 Pfleging, W., 370
 Pietralla, M., 954
 Pimenov, S.M., 1009, 1073
 Pinzari, F., 464, 628
 Pirri, C.F., 357, 473
 Pischor, K.A., 843
 Pitt, G.D., 617
 Plamann, K., 809, 820
 Plano, L.S., 622
 Plotnikov, S.A., 1020
 Podzyarei, G.A., 5
 Polesello, P., 517
 Polini, R., 1305
 Polo, M.C., 337, 780, 798
 Polyakov, V.I., 1061
 Popov, A.M., 1354
 Popovici, G., 877, 1365
 Prawer, S., 569, 710, 862
 Prelas, M.A., 877, 1365, 1382
 Priem, T., 350
 Prins, J.F., 580
 Pryor, R.W., 128
 Pytkin, B., 488

Qin, F., 1347
 Quaeyhaegens, C., 697

Rabalais, J.W., 318
 Raiko, V., 563

Rakhimov, A.T., 1065, 1354
 Ral'chenko, V.G., 754, 893, 964, 1073
 Rats, D., 207
 Rauschenbach, B., 410
 Ravet, M.F., 759
 Ravi, K.V., 243
 Ray, A., 20
 Rego, C.A., 730, 770, 794
 Reinke, S., 272, 375
 Ren, Z., 1347
 Riabkina-Fishman, M., 10
 Richter, V., 569
 Rigato, V., 357
 Ristein, J., 508
 Rivière, J.P., 1334
 Rizzi, A., 996
 Roberts, P.G., 394
 Robertson, J., 268, 297, 333, 441, 549, 559,
 637
 Roesler, M., 591
 Romani, S., 632
 Rong, X.F., 361
 Ronkainen, H., 843
 Ronning, C., 666
 Rosa, J., 697
 Rosman, N., 745
 Rosser, K.N., 770, 794
 Rossukanyi, N.M., 1061
 Roth, H., 333
 Rukovishnikov, A.I., 1061
 Rushton, N., 852, 857
 Rushworth, S.A., 632
 Rychkov, B.A., 314

Sadki, A., 492
 Saitoh, H., 1056
 Sakamoto, Y., 984
 Salacinski, R., 234
 Salo, J., 1329
 Salvadori, M.C., 1069, 1255
 Salvatori, S., 628
 Samlenski, R., 304, 503
 Samokhvalov, N.V., 964
 Sánchez, G., 780, 798
 Santos, L., 26, 53, 688
 Sathekge, M.N., 145
 Sato, Y., 59, 520, 600, 607
 Sattel, S., 268, 333, 559
 Sauer, R., 1189
 Savall, C., 596
 Schaarschmidt, G., 930
 Schäfer, J., 508
 Schaich, Th., 544
 Schaller, E., 612
 Schaper, L.W., 921
 Scheib, M., 333
 Scherer, J., 288
 Schermer, J.J., 250, 1113
 Schlapbach, L., 612
 Schlapp, M., 445
 Schmälzlin, J., 503
 Schmidt, I., 724
 Schram, D.C., 328, 908, 1271
 Schrecik, M., 410, 416
 Schreck, M., 553
 Schreiter, S., 361
 Schulz-von der Gathen, V., 324

Schwan, J., 288, 304
 Schwarz, K., 652
 Sczigel, G., 706
 Seleznev, B.V., 1354
 Semoto, K., 903
 Sénémaud, C., 897
 Sentek, J., 234
 Sepold, G., 1073
 Serra, P., 337
 Shaginyan, L.R., 113
 Shamamian, V.A., 1277
 Shen, C.-H., 921
 Shreter, Y.G., 1222
 Shi, C.R., 1079
 Shigeta, H., 984
 Shinoda, N., 1319
 Shirafuji, J., 984
 Siegal, M.P., 191
 Silva, R.F., 730
 Silva, S.R.P., 977
 Simpson, R.L., 191
 Singh, B.P., 1193
 Sinkovits, R.S., 1277
 Sleptsov, V.V., 109, 120
 Smeets, J., 366
 Smekhnov, A.A., 390
 Smirnov, I.S., 109
 Smith, L.M., 632
 Smolin, A.A., 754, 893, 1009, 1073
 Snail, K.A., 76
 Sobisch, B., 256, 401
 Sokołowska, A., 381, 386, 1131
 Solozhenko, V.L., 1, 1193
 Song, K.J., 460
 Speakman, S.P., 977
 Spiro, C., 76
 Spitzer, J., 1237
 Spitzl, R., 563
 Stadler, W., 53
 Stals, L.M., 697
 Steeds, J.W., 848, 1222
 Sternschulte, H., 1189
 Stiegler, J., 972
 Stizza, S., 488
 Stoner, B.R., 406, 1289
 Strel'nitskij, V.E., 791, 964
 Stritzker, B., 410, 416, 553
 Suehara, S., 520
 Suetin, N.V., 1065, 1354
 Sugino, T., 984
 Sung, T., 877
 Susalka, R., 76
 Sweeting, B., 76
 Szmidt, J., 1131
 Szymanski, A., 234

Tagliaferro, A., 361, 996, 1210
 Tallant, D.R., 191
 Tamor, M.A., 220
 Tan, B.H., 95
 Tan, H.S., 95
 Tan, W., 1145
 Tanaka, J., 59
 Tang, X.-M., 1137
 Tankala, K., 69
 Teremetskaya, I.G., 1061
 Tessmer, A.J., 622

Tessmer, G.J., 622
 Thèye, M.L., 492
 Thèye, M.-L., 897
 Thonke, K., 1189
 Timofeyev, M.A., 968, 1200
 Tinchuk, A.G., 964
 Titova, T.K., 314
 Tokarev, V.N., 169
 Tomčík, B., 1103, 1126
 Tomellini, M., 1305
 Tonck, A., 309
 Tourillon, G., 200
 Trakhtenberg, I.Sh., 1020
 Trava-Airoldi, V.J., 1255
 Tresso, E., 357, 473
 Tsong, T.T., 1371
 Tsurumi, T., 1319
 Twichell, J.C., 76

Ulrich, S., 288, 304
 Unakov, N.N., 120
 Urao, R., 1056
 Uzan-Saguy, C., 318, 569

Valiullova, Z.Kh., 968
 van de Sanden, M.C.M., 328, 908, 1271
 van Enckevort, W.J.P., 250
 Vandenbulcke, L., 207
 Vandersande, J.W., 641
 Vaněček, M., 697
 Varela, M., 337, 657, 780
 Varichenko, V.S., 877
 Varnin, V.P., 1061
 Veerasamy, V.S., 268, 637
 Veprek, S., 632
 Vereschaka, V.M., 113
 Verhoeven, H., 591
 Verven, G., 350
 Verwoerd, W.S., 532
 Vescan, A., 661
 Vieira, J., 730
 Vignes, A., 429
 Vincenzoni, R., 628
 Vittone, E., 517
 Vladimirov, A.B., 1020
 von Bardeleben, J., 492
 von Kaenel, Y., 972
 Voronkin, M.A., 5, 390
 Vrhovac, S.B., 1103

Wagner, J., 678
 Walsh, T.D., 794
 Wang, Z.Z., 759
 Weber, J., 1137
 Weiler, M., 268, 333
 Weis, O., 948, 958
 Weiser, P.S., 710
 Werbowy, A., 1131
 Werner, M., 456, 873
 Wesner, D.A., 370
 Westbrook, C.K., 1277
 Whitmore, T.D., 524
 Wiechert, D.U., 820
 Wild, C., 503, 652
 Will, G., 1193
 Wilson, H., 820
 Wilson, J.I.B., 169, 394, 445

Windischmann, H., 837
Won, J.H., 575
Wright, R.L., 586
Wynands, H.A., 622

Yagyu, H., 575
Yakovleva, S.G., 1020
Yamamoto, K., 520, 600
Yasu, E., 59
Yelisseyev, A.P., 177
Yin, Z., 95
Yoon, D.-Y., 989

Yoshikawa, M., 1357
Yugo, S., 903

Zahavi, J., 10
Zahn, D.R.T., 944
Zaika, N.I., 390
Zaitsev, A.M., 877
Zakharchuk, A.P., 390
Zakharov, A.P., 1383
Zalavutdinov, R.Kh., 1383
Zambare, M., 15
Zandolin, S., 357

Zarrabian, M., 492, 897
Zaytouni, M., 1334
Zdunek, K., 381
Zec, S., 186
Zecca, A., 499
Zellama, K., 492
Zeng, J., 33
Zhu, W., 95, 220
Zoltan, L.D., 641
Zubar, V.P., 964



Subject Index for Volume 4

Abrading
Columnar CVD diamond growth structure on irregular surface substrates, 1255

Absorption
Absolute density of the argon first excited states in plasmas used for carbon deposition as determined by absorption spectroscopy, 1271

Subgap optical absorption in CVD diamond films determined from PDS, 697

Acetylene
Comparison between methane and acetylene as carbon sources for C-rich a-SiC:H films, 473

Acetylene–oxygen flames
Combustion synthesis: most flexible diamond synthesis process?, 243
The influence of differences in gas phase between turbulent and laminar acetylene–oxygen combustion flames on diamond growth, 1113

Acid resistance
Graphite particles in the diamond-like a-C films prepared with the pulsed arc-discharge method, 1335

Adhesion
Adhesion of diamond films on Mo, W and carburized W substrates, 220
Diamond deposition on steel with CVD W intermediate layer, 754
Effect of biological fluids on adhesion of DLC films to metallic substrates, 852
Friction measurements on hot filament CVD diamond films deposited on etched WC surfaces, 730
Growth of well-adhering diamond coating on sintered W, 1079
Interfacial shear strength of DLC coatings deposited on metals, 787

Adhesion strength
Characterization and adhesion strength of diamond films deposited on silicon nitride inserts by d.c. plasma jet chemical vapour deposition, 1260

Amorphous carbon
Effect of additional treatment on tribological properties of a-C coatings on metals, 1020
Evaluation and parametric modelling of abrasive wear resistance of ion-plated thin DLC films, 1041
Gap states, doping and bonding in ta-C, 637
Manufacture of a-C layers by r.f. dense plasma CVD, 302
N doping of ta-C, 441
Photoablation of graphite target by a KrF laser beam.
Realisation of hard C thin films, 309
Structural models of a-C and a-C:H, 297
NEXAFS characterization of ion-beam-assisted carbon-sputtered thin films, 200

Amorphous carbon films
Electroconductivity of a-C films containing Si and W, 488

Amorphous hydrogenated carbon
Bulk and surface structure in a-C:H films, 996
Deposition of Fe-C:H coatings from ferrocene precursor in plasma-activated r.f. process, 346

Deposition of ta-C:H films by r.f. plasma discharges, 304
Deposition of α -C:H films in a Hall accelerator plasma, 314
DLC thin film deposition using magnetically confined r.f. PECVD system, 977
Effective correlation energies for defects in a-C:H from comparison of photoelectron yield and ESR, 508
Effects of bias and inert gas on properties of DLC deposited by d.c. PACVD, 62
Electronic density of states of a-C:H films with low and high optical gaps, 897
Friction mechanisms in hydrogenated amorphous carbon coatings, 1267
Influence of addition of CF₄ on deposition of a-C:H layers using expanding thermal plasma, 328
Network connectivity and structural defects in a-C:H films, 492
Structural changes in doped a-C:H films during annealing, 482
Structural characterization of a-C:H and a-CN_x:H films deposited by PECVD, 499
Structure and mechanical properties of a-C:H films deposited onto polymer substrates, 5
Spatially resolved photocurrent measurements on a-C:H/c-Si and a-C:H/a-Si:H heterojunction photodiodes, 692
Thermal properties of a-C:H films via mirage effect measurements, 954
Amorphous hydrogenated SiC films
Comparison between methane and acetylene as C sources for C-rich a-SiC:H films, 473
Amorphous silicon–carbon films
Structural and optoelectronic properties of C-rich a-SiC:H films, 357

Annealing
Annealing of diamond above 800 °C: Si₃N₄ encapsulation, 596
In situ doping of a-cBN layers, 1131
Ion implantation of diamond and diamond films, 862
Metallographic etching of polycrystalline diamond films by reaction with metal, 989
Structural changes in doped a-C:H films during annealing, 482

Applications
CVD diamond films on bio-medical ceramics, 798
HT pressure sensor using p-type diamond piezoresistors, 873
In vitro studies of DLC coatings with Si intermediate layer, 857
Manufacture of a-C layers by r.f. dense plasma CVD, 302
Multilayer diamond-like structures for X-ray optics, 109

Atomic force microscopy
Correlation of electrical, thermal, and optical properties of CVD diamond films by SM techniques, 645
Effect of atomic hydrogen on surface topography of CVD diamond films: AFM study, 155
Growth mechanisms of DLC films from C⁺ ions, 318

Atomic hydrogen
Effect of atomic hydrogen on surface topography of CVD diamond films: AFM study, 155
Formation of CH₂ species during diamond CVD, 740
Quantitative measurements of atomic H during deposition of DLC films, 324

Atomic species
 Atom beam treatment of diamond films, 445

Band structure
 Valence band spectroscopy of reconstructed (100) and (111) natural diamond, 539

Bias
 Effects of bias and inert gas on properties of DLC deposited by d.c. PACVD, 62

Biocompatibility
 New medical material based on metastable form of carbon, 1142

Biomaterial
 The corrosion tests of amorphous carbon coatings deposited by r.f. dense plasma onto steel with different chromium contents, 1251

Biomedical applications
 Effect of biological fluids on adhesion of DLC films to metallic substrates, 852

BN phases
 Elemental composition of thin c-BN layers, 478

Bonding
 Gap states, doping and bonding in ta-C, 637
 Halogenation of C surfaces by atomic beams: HOPG graphite, 216
 N doping of ta-C, 441
 Structural models of a-C and a-C:H, 297

Boron
 Stresses generated by impurities in diamond, 1346
 Study of chemical bonds in carbon and boron materials by EPMA, 1383

Boron doping
 B and H concentrations in p-type diamond films by IR spectroscopy, 469
 Hall mobility and carrier concentration of B-doped homoepitaxially grown diamond (001) films, 59
 HT measurements of diamond thin films, 673
 Surface interactions on B implanted into diamond, 145
 Weak optical absorption coefficients in polycrystalline diamond thin films by PDS, 684

Boron nitride
 Diamond on heteroepitaxial cBN on Si(100), 128
 In-flame crystallization of metastable BN form, 386
 Laser-induced reactive crystallization of metastable BN from Cu implanted with B^+ and N_2^+ ions, 381
 New concept of BN phase diagram: an applied aspect, 1
 On the low-pressure synthesis of cubic boron nitride, 1193
 Optical and structural characterization of BN thin films, 657
 Preparation of thin hard BN films by r.f. magnetron sputtering, 113
 Structure and chemical composition of BN thin films grown by PLD, 370

Buffer layer
 Diamond deposition on steel with CVD W intermediate layer, 754
 TiN as interlayer for diamond deposition on steel, 1088

Bulk diamond
 Dynamical processes of 2.818 eV centre in diamond, 26
 "Mosaic" growth of diamond, 1025
 Photoconductivity of natural diamonds, 688
 Slow emission of 2.56 eV centre in synthetic diamond, 53

C_3N_4
 C_3N_4 or bust, 1093

Carbide
 Production of boron carbides by IR laser-induced gas phase reactions, 917

The behaviour of the molybdenum–CVD diamond interface at high temperature, 1137

Carbon
 Study of chemical bonds in carbon and boron materials by EPMA, 1383

Carbon implantation
 Diamond growth by carbon ion implantation of diamond, 1353

Carbon nitride
 Deposition by reactive ion-plasma sputtering and characterization of C–N thin films, 390
 N implantation into glassy carbon to grow carbon nitride thin films, 292
 Tribology of C coatings: DLC, diamond and beyond, 827

Carbyne
 New medical material based on metastable form of carbon, 1142

Catalytic processes
 Enhanced oxidation etching of diamond films in presence of Mo by annealing in ambient atmosphere, 95

Cathodoluminescence
 Ion implantation in CVD diamond and plasma treatment effect, 575
 Strain and microstructure variation in grains of CVD diamond film, 1222

Cemented carbide
 Effect of post-deposition polishing of diamond films on machining behavior of diamond-coated cutting tools, 921

Characterization
 Bias-enhanced nucleation of diamond on Si, 559
 Characterization of CVD diamond films by nuclear techniques with α particles, 517
 Characterization of homoepitaxial diamond films by nuclear methods, 503
 D.c. arc plasma deposition of smooth nanocrystalline diamond films, 1073
 Diamond on heteroepitaxial cBN on Si(100), 128
 Effect of organic precursors on diamond nucleation on Si, 720
 Photoyield measurements of CVD diamond, 806
 Some effects of silicon substrate roughness on growth of highly oriented $\langle 100 \rangle$ diamond films, 406
 The influence of differences in gas phase between turbulent and laminar acetylene–oxygen combustion flames on diamond growth, 1113

Chemical bond
 Study of chemical bonds in carbon and boron materials by EPMA, 1383

Chemical characterization
 Production of boron carbides by IR laser-induced gas phase reactions, 917
 Role of sodium nickelate in metastable recrystallization of diamond, 20

Chemical kinetics
 An analysis of gas phase ethanol–water chemistry for diamond CVD, 1277

Chemical vapour deposition
 An analysis of gas phase ethanol–water chemistry for diamond CVD, 1277
 CVD of diamond onto iron based substrates, 710
 2-D model of reactive gas flow in diamond film CVD reactor, 1065
 Deposition of Fe-C:H coatings from ferrocene precursor in plasma-activated r.f. process, 346
 Diamond film formation by laser evaporation of highly dispersive diamond in a hydrogen plasma environment, 1200
 Evolution of density of graphite-like defects during CVD diamond growth, 972
 Formation of CH_2 species during diamond CVD, 740
 Growth of P and N co-doped diamond films, 775

Influence of P addition on diamond CVD, 133
 Nucleation layers for high-quality diamond CVD from r.f. plasma, 735
 Photoluminescence study of $\langle 100 \rangle$ textured CVD diamonds, 425
 Step-related growth phenomena on exact and misoriented $\{100\}$ surfaces of CVD-grown single-crystal diamonds, 250
Chemisorption
 H-D exchange reaction on diamond surfaces by diffuse reflectance FTIR, 607
Coating
 Influence of temperature on the structure of SiC coatings prepared by dynamic ion mixing, 1340
Cold plasma
 Absolute density of the argon first excited states in plasmas used for carbon deposition as determined by absorption spectroscopy, 1271
 Absorption spectroscopy of atomic and molecular C population densities in expanding thermal arc plasma, 908
Columnar growth
 Columnar CVD diamond growth structure on irregular surface substrates, 1255
Combustion flame CVD
 In-flame crystallization of metastable BN form, 386
 Substantial effect of linear velocity of combustion flame on oriented growth of diamond, 186
 Substrate temperature measured by film-on-plate thermocouple during diamond growth using combustion flame technique, 1056
Combustion synthesis
 Combustion synthesis: the most flexible diamond synthesis process?, 243
Composites
 CVD diamond-coated fibres, 794
 Potential high-strength high thermal conductivity metal-matrix composites based on diamond fibres, 848
Computer simulation
 Effect of bias enhanced nucleation on the nucleation density of diamond in microwave plasma CVD, 1325
Correlations
 Assessing polar and azimuthal correlations for an oriented mosaic of (001) diamond crystallites on (001) silicon, 1289
Crystal growth
 High pressure diamond and c-BN synthesis, 284
 New concept of BN phase diagram: an applied aspect, 1
Crystalline inclusions
 Behavior of gas inclusions in diamond generated by temperature changes, 83
 Capabilities of plasma beam discharge for formation of DLC films, 120
 Elemental composition of thin c-BN layers, 478
 Nucleation of c-BN with ion-induced PECVD, 375
 Plasma beam discharge for formation of DLC films, 120
 Recent results in c-BN deposition in light of sputter model, 272
 R.f. ion plating-induced phase transition from h-BN to nanocrystalline c-BN, 288
 Surface reconstructions of c-BN(001) N-rich surface, 532
Cubic boron nitride
 Comparative aspects of c-BN and diamond CVD, 714
 Formation of c-BN in Mg_3N_2 -BN: new contribution to phase diagram, 1046
 High pressure diamond and c-BN synthesis, 284
 In situ doping of a-cBN layers, 1131
 New concept of BN phase diagram: an applied aspect, 1
 On the low-pressure synthesis of cubic boron nitride, 1193
 Rapid formation of c-BN in Mg_3N_2 -hBN, 1050
Cutting tool
 Effect of post-deposition polishing of diamond films on machining behavior of diamond-coated cutting tools, 921
CVD
 Effect of bias enhanced nucleation on the nucleation density of diamond in microwave plasma CVD, 1325
CVD diamond
 CVD diamond-coated fibres, 794
CVD diamond films
 Analysis of the fine structure of the Raman line and of X-ray reflection profiles for textured CVD diamond films, 1243
CVD microwave
 Chemical and morphological modifications of Si wafers treated by ultrasonic impacts of powders, 759
 Hall mobility and carrier concentration of B-doped homoepitaxially grown diamond (001) films, 59
 MWPACVD diamond homoepitaxial growth: role of plasma and substrate parameters, 429
 Permeable diamond membranes, 1069
D.c. bias measurement
 Bias-enhanced nucleation of diamond on Si, 559
 Characterization of bias nucleation process, 401
 Optical characterization of cathode plasma sheath during biasing step for diamond nucleation on Si, 553
D.c. plasma CVD
 Comparative study of microcrystalline diamond, 968
 D.c. arc plasma deposition of smooth nanocrystalline diamond films, 1073
 Diamond deposition on steel with CVD W intermediate layer, 754
 Effects of bias and inert gas on properties of DLC deposited by d.c. PACVD, 62
 Emission spectroscopy diagnostics of d.c. plasma jet diamond reactor, 350
 Influence of plasma parameters on properties of diamond films deposited by d.c. arc technique, 33
 Measurement of electron energy distribution functions in CH_4-H_2 plasma, 524
 Metallographic etching of polycrystalline diamond films by reaction with metal, 989
 Production of polycrystalline diamond films by d.c. glow discharge CVD, 964
Defect model
 I/V characteristics of epitaxial Schottky Au barrier diode on p⁺ diamond substrate, 661
Defects
 Characterization of homoepitaxial diamond films by nuclear methods, 503
 Damage in diamond implanted at low temperatures, 569
 Effective correlation energies for defects in a-C:H from comparison of photoelectron yield and ESR, 508
 Photoinduced absorption lines related to Ni impurity in annealed synthetic diamonds, 177
 Study of antiphase boundaries and local 3 × 1 configuration on the (001) surface of homoepitaxial diamond films by scanning tunneling microscopy, 1371
 Subgap optical absorption in CVD diamond films determined from PDS, 697
 Uniaxial stress and Zeeman splitting of the 1.681 eV optical center in a homoepitaxial CVD diamond film, 1189
Deposition
 Pressure influence on diamond deposition domain from various C-H-O(-Ar)-containing gaseous mixtures, 207
Deposition mechanism
 Dependence of gas composition in microwave diamond PACVD reactor on inlet carbon source: CH_4 vs. C_2H_2 , 1000

Growth mechanisms of DLC films from C⁺ ions, 318
 Preparation of thin hard BN films by r.f. magnetron sputtering, 113

Device
 Diamond junction cold cathode, 586
 HT pressure sensor using p-type diamond piezoresistors, 873

Diamond
 An analysis of gas phase ethanol–water chemistry for diamond CVD, 1277
 Assessing polar and azimuthal correlations for an oriented mosaic of (001) diamond crystallites on (001) silicon, 1289
 Characterization of bias nucleation process, 401
 Combustion synthesis: the most flexible diamond synthesis process?, 243
 Comparative aspects of c-BN and diamond CVD, 714
 CVD of diamond onto iron based substrates, 710
 Diamond devices and electrical properties, 622
 Diamond film deposition using surface wave discharges, 149
 Diamond on heteroepitaxial cBN on Si(100), 128
 Dry etching of undoped and B doped polycrystalline diamond films, 456
 Effect of atomic H on surface topography of CVD diamond films: AFM study, 155
 Epitaxial diamond–SiC heterojunctions, 632
 Epitaxy of diamond on Si, 394
 Evolution of plumes produced by laser ablation of C target, 337
 F₂, H₂O, and O₂ etching rates of diamond and the effects of F₂, HF and H₂O on the molecular O₂ etching of (110) diamond, 1317
 Formation of CH₂ species during diamond CVD, 740
 Growth of diamond by laser ablation of graphite, 780
 Growth of homoepitaxial diamond films on superpolished substrates in pulsed microwave plasma, 958
 HT measurements of diamond thin films, 673
 Influence of P addition on diamond CVD, 133
 In situ Raman monitoring of growth of diamond films in PACVD reactors, 745
 Micro-Raman for diamond film stress analysis, 460
 MWPACVD diamond homoepitaxial growth: role of plasma and substrate parameters, 429
 Negative electron affinity effects on H plasma exposed diamond (100) surfaces, 802
 Novel technique for diamond film deposition using surface wave discharges, 149
 Nucleation layers for high-quality diamond CVD from r.f. plasma, 735
 Optical and electrical characterization of B-doped diamond films, 678
 Optical second-harmonic generation on diamond C(111) surface, 544
 Permeable diamond membranes, 1069
 Photoconductivity of natural diamonds, 688
 Prediction of feasibility of oriented diamond films by microwave PACVD, 419
 Pressure influence on diamond deposition domain from various C–H–O(–Ar)-containing gaseous mixtures, 207
 Prospective n-type impurities and methods of diamond doping, 1305
 Raman for diamond film stress analysis, 460
 Surface interactions on B implanted into diamond, 145
 Thermal measurements on diamond and related materials, 809
 Tribology of carbon coatings: DLC, diamond and beyond, 827
 Uniaxial stress and Zeeman splitting of the 1.681 eV optical center in a homoepitaxial CVD diamond film, 1189
 XPD on Ni/diamond, Si/diamond and Au/diamond interface, 612

Diamond characterization
 Diamond growth by carbon ion implantation of diamond, 1353
Diamond-coated tools
 Quantitative measurement of temperatures on diamond-coated tools during machining, 1216
Diamond CVD
 Columnar CVD diamond growth structure on irregular surface substrates, 1255
 Studies on nucleation process in diamond CVD: an overview of recent developments, 1173
Diamond defects
 Comparative study of microcrystalline diamond, 968
 Dynamical processes of 2.818 eV centre in diamond, 26
 Evolution of density of graphite-like defects during CVD diamond growth, 972
 Slow emission of 2.56 eV centre in synthetic diamond, 53
 Weak optical absorption coefficients in polycrystalline diamond thin films by PDS, 684
Diamond defect structure
 Diamond growth by carbon ion implantation of diamond, 1353
Diamond deposition reactor
 Modelling the electromagnetic field and plasma discharge in a microwave plasma diamond deposition reactor, 1145
Diamond films
 Adhesion of diamond films on Mo, W and carburized W substrates, 220
 Atom beam treatment of diamond films, 445
 Characterization and adhesion strength of diamond films deposited on silicon nitride inserts by d.c. plasma jet chemical vapour deposition, 1260
 CVD diamond films on bio-medical ceramics, 798
 D.c. arc plasma deposition of smooth nanocrystalline diamond films, 1073
 Diamond film formation by laser evaporation of highly dispersive diamond in a hydrogen plasma environment, 1200
 Direct imaging and confocal mapping of diamond films using luminescence and Raman scattering, 617
 Effect of bias enhanced nucleation on the nucleation density of diamond in microwave plasma CVD, 1325
 Effect of mechanical stress on absorption band tail in polycrystalline diamond films, 122
 Electrical characterization of homoepitaxial diamond films doped with B, P, Li and Na during crystal growth, 948
 Emission spectroscopy diagnostics of d.c. plasma jet diamond reactor, 350
 Fine patterning of diamond films by laser-assisted chemical etching in oxygen, 893
 Friction measurements on hot filament CVD diamond films deposited on etched WC surfaces, 730
 Gas phase composition and film properties of hot filament diamond synthesis from CH₄–H₂–O₂ gas mixtures, 724
 Growth of well-adhering diamond coating on sintered W, 1079
 Influence of growth process on film texture of epitaxially nucleated diamond on Si(001), 410
 Influence of plasma parameters on properties of diamond films deposited by d.c. arc technique, 33
 Local distribution of SiC formed by diamond heteroepitaxy on Si studied by IR spectroscopy, 944
 Metallographic etching of polycrystalline diamond films by reaction with metal, 989
 P and N co-doped diamond films, 775
 Properties of diffused diamond films with n-type conductivity, 877
 Relation between HFCVD diamond growth rate, line-width of Raman spectrum and particle size, 464
 Stress measurement of CVD diamond films, 837

Study of antiphase boundaries and local 3×1 configuration on the (001) surface of homoepitaxial diamond films by scanning tunneling microscopy, 1371

Thermal diffusivity measurements by "instantaneous phase portrait" method, 1360

TiN as interlayer for diamond deposition on steel, 1088

Tribological properties of smooth polycrystalline diamond films, 1009

2-D model of reactive gas flow in diamond film CVD reactor, 1065

XPS of plasma-treated surfaces of diamond films, 984

Diamond growth

- Effect of organic precursors on diamond nucleation on Si, 720

Diamond laser

- Theoretical aspects of diamond films and laser action, 1376

Diamond-like carbon

- Acoustic emission on microdestruction of DLC coatings prepared by vacuum-arc deposition, 791
- Capabilities of plasma beam discharge for formation of DLC films, 120
- Conduction processes in B- and N-doped DLC films prepared by mass-separated IBD, 666
- Deposition of DLC film in $\text{CH}_4\text{-He}$ r.f. plasma, 342
- Deposition of ta-C : H films by r.f. plasma discharges, 304
- DLC thin film deposition using magnetically confined r.f. PECVD system, 977
- DLC multilayer coatings for wear protection, 936
- Effect of biological fluids on adhesion of DLC films to metallic substrates, 852
- Effects of bias and inert gas on properties of DLC deposited by d.c. PACVD, 62
- In vitro studies of DLC coatings with Si intermediate layer, 857
- Interfacial shear strength of DLC coatings deposited on metals, 787
- Mechanical properties of C metal multilayered films, 843
- Multilayer diamond-like structures for X-ray optics, 109
- Optical emissions during PACVD of DLC films, 69
- Plasma beam discharge for formation of DLC films, 120
- Properties of unhydrogenated DLC films deposited by ArF excimer laser, 10
- Quantitative measurements of atomic H during deposition of DLC films, 324
- R.f. plasma-assisted deposition of DLC films from methanol-water vapour mixture, 15
- Structural models of a-C and a-C : H, 297
- Thermal stability of DLC, 191
- Tribology of C coatings: DLC, diamond and beyond, 827

Diamond-like coatings

- The corrosion tests of amorphous carbon coatings deposited by r.f. dense plasma onto steel with different chromium contents, 1251

Diamond-like films

- Deposition and characterization of a-C : N thin films, 361
- Deposition of Fe-C : H coatings from ferrocene precursor in plasma-activated r.f. process, 346
- Evaluation and parametric modelling of abrasive wear resistance of ion-plated thin DLC films, 1041
- Formation of ta-C : H, 268
- Graphite particles in the diamond-like a-C films prepared with the pulsed arc-discharge method, 1335
- Growth mechanisms of DLC films from C^+ ions, 318
- Kinetics of the diamond-like film deposition on glass fibers, 1126
- Nucleation during deposition of hydrocarbon ions as function of substrate temperature, 333
- Substrate bias effect on tribological properties of a-Si_{1-x}C_x : H films, 366

The influence of excited states on the kinetics of excitation and dissociation in gas mixtures containing methane, 1103

Diamond nucleation

- Bias-enhanced nucleation of diamond on Si, 559
- Characterization of bias nucleation process, 401
- Chemical and morphological modifications of Si wafers treated by ultrasonic impacts of powders, 759
- Effect of organic precursors on diamond nucleation on Si, 720
- Effect of surface defects on CVD diamond nucleation of 6H SiC, 261
- Modelling of diamond nucleation, 903
- Modelling of stress-induced diamond nucleation, 706
- Nucleation during deposition of hydrocarbon ions as function of substrate temperature, 333

Diamond polycrystalline

- Diamond CVD nucleation on quartz by high dose Ti implantation, 765

Diamond polytypes

- Analysis of the fine structure of the Raman line and of X-ray reflection profiles for textured CVD diamond films, 1243

Diamond Schottky diode

- I/V characteristics of epitaxial Schottky Au barrier diode on p⁺ diamond substrate, 661

Diamond subsurface growth

- Diamond growth by carbon ion implantation of diamond, 1353

Diamond synthesis

- The influence of differences in gas phase between turbulent and laminar acetylene-oxygen combustion flames on diamond growth, 1113

Diffusion

- The behaviour of the molybdenum-CVD diamond interface at high temperature, 1137

Diode

- Epitaxial diamond-SiC heterojunctions, 632
- Spatially resolved photocurrent measurements on a-C : H/c-Si and a-C : H/a-Si : H heterojunction photodiodes, 692

Direct band transition

- Theoretical aspects of diamond films and laser action, 1376

Doping

- Conduction processes in B- and N-doped DLC films prepared by mass-separated IBD, 666
- Damage in diamond implanted at low temperatures, 569
- Diamond junction cold cathode, 586
- DLC thin film deposition using magnetically confined r.f. PECVD system, 977
- Electrical characterization of homoepitaxial diamond films doped with B, P, Li and Na during crystal growth, 948
- Growth of P and N co-doped diamond films, 775
- Influence of P addition on diamond CVD, 133
- Ion implantation of diamond and diamond films, 862
- Optical and electrical characterization of B-doped diamond films, 678

Doping n-type

- Deformation of N doped cubic polytype SiC, 784
- In situ doping of a-cBN layers, 1131
- Ion-implanted n-type diamond: electrical evidence, 580
- N doping of ta-C, 441
- Properties of diffused diamond films with n-type conductivity, 877

Doping p-type

- Electrical properties of B-doped diamond films after annealing, 451
- Surface interactions on B implanted into diamond, 145

Dry cutting

- Quantitative measurement of temperatures on diamond-coated tools during machining, 1216

Dynamic ion mixing

- Influence of temperature on the structure of SiC coatings prepared by dynamic ion mixing, 1340

Elastic recoil detection

- Elemental composition of thin c-BN layers, 478
- Impurities of light elements in CVD diamond, 591

Electrical conductivity

- Damage in diamond implanted at low temperatures, 569
- HT electrical resistivity measurements to determine quality of diamond films, 641
- HT measurements of diamond thin films, 673
- Ion-implanted n-type diamond: electrical evidence, 580

Electrical properties

- Capabilities of plasma beam discharge for formation of DLC films, 120
- Conduction processes in B- and N-doped DLC films prepared by mass-separated IBD, 666
- DLC thin film deposition using magnetically confined r.f. PECVD system, 977
- Electrical characterization of homoepitaxial diamond films doped with B, P, Li and Na during crystal growth, 948
- Electrical properties of polycrystalline diamond films on Si, 628
- HT electrical resistivity measurements to determine quality of diamond films, 641
- HT pressure sensor using p-type diamond piezoresistors, 873
- In situ doping of a-cBN layers, 1131
- Ion implantation of diamond and diamond films, 862
- Optical and electrical characterization of B-doped diamond films, 678
- Plasma beam discharge for formation of DLC films, 120
- Properties of diffused diamond films with n-type conductivity, 877
- Subgap optical absorption in CVD diamond films determined from PDS, 697

Electroconductivity

- Electroconductivity of a-C films containing Si and W, 488

Electrode arrangement

- Effects of electrode arrangement and pressure on synthesis of diamond films by arc discharge plasma jet chemical vapor deposition, 1363

Electron energy loss spectroscopy

- Surface vibrational studies of CVD diamond, 600

Electron energy loss

- Bulk and surface structure in a-C: H films, 996

Electron paramagnetic resonance

- Deposition and characterization of a-C: N thin films, 361
- Effective correlation energies for defects in a-C: H from comparison of photoelectron yield and ESR, 508
- Evolution of density of graphite-like defects during CVD diamond growth, 972
- Gap states, doping and bonding in ta-C, 637
- Network connectivity and structural defects in a-C: H films, 492

Electromagnetic modelling

- Modelling the electromagnetic field and plasma discharge in a microwave plasma diamond deposition reactor, 1145

Electron spectroscopy

- Electronic density of states of a-C: H films with low and high optical gaps, 897
- R.f. plasma-assisted deposition of DLC films from methanol–water vapour mixture, 15
- Structure and chemical composition of BN thin films grown by PLD, 370
- Valence band spectroscopy of reconstructed (100) and (111) natural diamond, 539

Electron spin resonance

- Magnetic and spin properties of ta-C, 912

Electronic devices

- Diamond devices and electrical properties, 622

Electronic transport

- Diamond devices and electrical properties, 622

Ellipsometry

- Optical and structural characterization of hydrogenated amorphous silicon carbide thin films prepared by r.f. plasma chemical vapour deposition, 1205
- Spectral ellipsometric and compositional characterization of a-SiC: H thin films, 702

Etching

- Effect of atomic hydrogen on surface topography of CVD diamond films: AFM study, 155
- Enhanced oxidation etching of diamond films in presence of Mo by annealing in ambient atmosphere, 95
- F₂, H₂O, and O₂ etching rates of diamond and the effects of F₂, HF and H₂O on the molecular O₂ etching of (110) diamond, 1317
- Fine patterning of diamond films by laser-assisted chemical etching in oxygen, 893
- Metallographic etching of polycrystalline diamond films by reaction with metal, 989
- Role of sodium nickelate in metastable recrystallization of diamond, 20

Ethanol–water

- An analysis of gas phase ethanol–water chemistry for diamond CVD, 1277

Evaporation

- Thermodynamic analysis of phase transformations at the dissociative evaporation of silicon carbide polytypes, 1331

Ferromagnetic impurity

- Magnetic and spin properties of ta-C, 912

Fibres

- Potential high-strength high thermal conductivity metal-matrix composites based on diamond fibres, 848

Fluorine

- F₂, H₂O, and O₂ etching rates of diamond and the effects of F₂, HF and H₂O on the molecular O₂ etching of (110) diamond, 1317

Free-standing

- Permeable diamond membranes, 1069

Friction

- Friction measurements on hot filament CVD diamond films deposited on etched WC surfaces, 730

Friction mechanism

- Friction mechanisms in hydrogenated amorphous carbon coatings, 1267

Gas flow model

- 2-D model of reactive gas flow in diamond film CVD reactor, 1065

Gas phase

- Thermal properties of C/H-, C/H/O- and C/H/X-grown polycrystalline CVD diamond, 820

Gas phase chemistry

- Dependence of gas composition in microwave diamond PACVD reactor on inlet carbon source: CH₄ vs. C₂H₂, 1000
- Gas-phase mechanisms in MWCVD ad HFCVD diamond deposition, 256
- In-situ mass spectrometric study of gas-phase species involved in CVD of diamond as function of filament temperature, 770

Gas phase diagnostics

- Dependence of gas composition in microwave diamond PACVD reactor on inlet carbon source: CH₄ vs. C₂H₂, 1000
- Emission spectroscopy diagnostics of d.c. plasma jet diamond reactor, 350

Gas-phase mechanisms in MWCVD and HFCVD diamond deposition, 256

Gas phase reaction

- Production of boron carbides by IR laser-induced gas phase reactions, 917

Gas phase reactor

- Diamond film deposition using surface wave discharges, 149
- Manufacture of a-C layers by r.f. dense plasma CVD, 302
- Novel technique for diamond film deposition using surface wave discharges, 149

Gas phase species

- Gas phase composition and film properties of hot filament diamond synthesis from $\text{CH}_4\text{-H}_2\text{-O}_2$ gas mixtures, 724

Glassy carbon

- Effect of organic precursors on diamond nucleation on Si, 720

Grain size

- Columnar CVD diamond growth structure on irregular surface substrates, 1255

Graphite

- Halogenation of C surfaces by atomic beams: HOPG graphite, 216

Growth

- Diamond film deposition using surface wave discharges, 149
- Novel technique for diamond film deposition using surface wave discharges, 149
- "Mosaic" growth of diamond, 1025

Growth kinetics

- Influence of P addition on diamond CVD, 133

Growth mechanisms

- Hypothetical C_{100} molecule and diamond-graphite interface: unstable and metastable states of carbon, 528

Growth morphology

- Characterization of CVD diamond films by nuclear techniques with α particles, 517
- MWPACVD diamond homoepitaxial growth: role of plasma and substrate parameters, 429
- Relation between HFCVD diamond growth rate, line-width of Raman spectrum and particle size, 464

Growth rate

- Effects of electrode arrangement and pressure on synthesis of diamond films by arc discharge plasma jet chemical vapor deposition, 1363

Halide chemistry

- Halogenation of C surfaces by atomic beams: HOPG graphite, 216

Hardness

- D.c. arc plasma deposition of smooth nanocrystalline diamond films, 1073
- Indentation response of diamond thin films, 43
- Photoablation of graphite target by KrF laser beam. Realisation of hard C thin films, 309

Heated filament CVD

- CVD diamond films on bio-medical ceramics, 798
- Diamond junction cold cathode, 586
- Electrical properties of polycrystalline diamond films on Si, 628
- Friction measurements on hot filament CVD diamond films deposited on etched tungsten carbide surfaces, 730
- Gas phase composition and film properties of hot filament diamond synthesis from $\text{CH}_4\text{-H}_2\text{-O}_2$ gas mixtures, 724
- Gas-phase mechanisms in MWCVD and HFCVD diamond deposition, 256
- In situ optical investigations of diamond thin film growth on Mo substrates, 750
- In-situ mass spectrometric study of gas-phase species involved in CVD of diamond as function of filament temperature, 770
- "Mosaic" growth of diamond, 1025

Heteroepitaxy

- Diamond on heteroepitaxial cBN on Si(100), 128
- Electrical characterization of homoepitaxial diamond films doped with B, P, Li and Na during crystal growth, 948
- Epitaxial diamond-SiC heterojunctions, 632
- Epitaxy of diamond on Si, 394
- Growth of homoepitaxial diamond films on superpolished substrates in pulsed microwave plasma, 958
- Influence of growth process on film texture of epitaxially nucleated diamond on Si(001), 410
- Mosaic diamond substrates approaching single-crystal quality using cube-shaped diamond seeds, 76
- "Mosaic" growth of diamond, 1025
- XPD on N/diamond, Si/diamond and Au/diamond interface, 612

HFCVD

- Photoelectrical effects in heterostructures based on HF CVD diamond films, 1061

High pressure synthetic diamond

- High pressure diamond and c-BN synthesis, 284
- Behavior of gas inclusions in diamond generated by temperature changes, 83
- C_3N_4 or bust, 1093
- Formation of c-BN in $\text{Mg}_3\text{N}_2\text{-BN}$: new contribution to phase diagram, 1046
- High pressure diamond and c-BN synthesis, 284
- Rapid formation of c-BN in $\text{Mg}_3\text{N}_2\text{-hBN}$, 1050

High resolution depth profiling

- Elemental composition of thin c-BN layers, 478
- Impurities of light elements in CVD diamond, 591

Holographic interferometry

- Thermal diffusivity measurements by "instantaneous phase portrait" method, 1360

Homoepitaxy

- Characterization of homoepitaxial diamond films by nuclear methods, 503
- Diamond devices and electrical properties, 622
- Hall mobility and carrier concentration of B-doped homoepitaxially grown diamond (001) films, 59
- MWPACVD diamond homoepitaxial growth: role of plasma and substrate parameters, 429
- Valence-band spectra of hydrogenated diamond (111) surface, 520

Hot filament CVD

- Analysis of size distribution functions of diamond crystallites formed in the early stages of chemical vapour deposition, 1311

Humidity effects

- Friction mechanisms in hydrogenated amorphous carbon coatings, 1267

Hydrocarbon plasma

- Deposition of $\alpha\text{-C:H}$ films in Hall accelerator plasma, 314

Hydrogen

- Atom beam treatment of diamond films, 445
- Characterization of homoepitaxial diamond films by nuclear methods, 503
- Diamond film formation by laser evaporation of highly dispersive diamond in a hydrogen plasma environment, 1200
- H-related IR absorption in CVD diamond, 652
- Negative electron affinity effects on H plasma exposed diamond (100) surfaces, 802
- Optical second-harmonic generation on diamond C(111) surface, 544
- Spatially resolved photocurrent measurements on a-C:H/c-Si and a-C:H/a-Si:H heterojunction photodiodes, 692

Stresses generated by impurities in diamond, 1346
 Study of antiphase boundaries and local 3×1 configuration on the (001) surface of homoepitaxial diamond films by scanning tunneling microscopy, 1371

Hydrogen desorption
 Valence band spectroscopy of reconstructed (100) and (111) natural diamond, 539

Hydrogenated carbon
 Determination of the sp^3/sp^2 ratio in a-C:H films by infrared spectrometry analysis, 1210

Hydrothermal synthesis
 Diamond formed at low pressures and temperatures through liquid-phase hydrothermal synthesis, 234

Implantation
 N implantation into glassy carbon to grow carbon nitride thin film, 292

Impurities
 B and H concentrations in p-type diamond films by IR spectroscopy, 469
 Impurities of light elements in CVD diamond, 591
 Photoconductivity of natural diamonds, 688
 Structural changes in doped a-C:H films during annealing, 482

In-situ characterization
 Formation of c-BN in Mg_3N_2 -BN: new contribution to phase diagram, 1046
 In situ optical investigations of diamond thin film growth on Mo substrates, 750
 In situ Raman monitoring of growth of diamond films in PACVD reactors, 745
 Influence of addition of CF_4 on deposition of a-C:H layers using expanding thermal plasma, 328
 Rapid formation of c-BN in Mg_3N_2 -hBN, 1050

In-situ diagnostics
 In-situ mass spectrometric study of gas-phase species involved in CVD of diamond as function of filament temperature, 770
 Measurement of electron energy distribution functions in methane-hydrogen plasmas, 524

Infrared absorption
 B and H concentrations in p-type diamond films by IR spectroscopy, 469
 Characterization of bias nucleation process, 401
 Electrical properties of B-doped diamond films after annealing, 451
 Local distribution of SiC formed by diamond heteroepitaxy on Si studied by IR spectroscopy, 944
 R.f. ion plating-induced phase transition from h-BN to nanocrystalline c-BN, 288
 Subgap optical absorption in CVD diamond films determined from PDS, 697
 Weak optical absorption coefficients in polycrystalline diamond thin films by PDS, 684

Insulating fibres
 CVD diamond-coated fibres, 794

Infrared transmission
 Influence of addition of CF_4 on deposition of a-C:H layers using expanding thermal plasma, 328
 Local distribution of SiC formed by diamond heteroepitaxy on Si studied by IR spectroscopy, 944
 Photoablation of graphite target by KrF laser beam. Realisation of hard C thin films, 309

Interface
 Hypothetical C_{100} molecule and diamond-graphite interface: unstable and metastable states of C, 528
 Local distribution of SiC formed by diamond heteroepitaxy on Si studied by IR spectroscopy, 944

The behaviour of the molybdenum-CVD diamond interface at high temperature, 1137
 The corrosion tests of amorphous carbon coatings deposited by r.f. dense plasma onto steel with different chromium contents, 1251

Interfacial layers
 CVD of diamond onto Fe based substrates, 710
 Effect of biological fluids on adhesion of DLC films to metallic substrates, 852
 In vitro studies of DLC coatings with Si intermediate layer, 857
 Mechanical properties of C metal multilayered films, 843

Interfacial shear strength
 Friction mechanisms in hydrogenated amorphous carbon coatings, 1267

Ion-assisted deposition
 Bias-enhanced nucleation and heteroepitaxy of diamond on Si, 549
 NEXAFS characterization of ion-beam-assisted carbon-sputtered thin films, 200
 Nucleation of c-BN with ion-induced PECVD, 375
 Recent results in c-BN deposition in light of sputter model, 272

Ion beam growth
 Conduction processes in B- and N-doped DLC films prepared by mass-separated IBD, 666
 Evaluation and parametric modelling of abrasive wear resistance of ion-plated thin DLC films, 1041
 Formation of ta-C:H, 268
 Growth mechanisms of DLC films from C^+ ions, 318
 Nucleation during deposition of hydrocarbon ions as function of substrate temperature, 333

Ion bombardment
 Bias-enhanced nucleation of diamond on Si, 559
 Deposition of Fe-C:H coatings from ferrocene precursor in plasma-activated r.f. process, 346
 Effect of additional treatment on tribological properties of a-C coatings on metals, 1020
 R.f. ion plating-induced phase transition from h-BN to nanocrystalline c-BN, 288

Ion implantation
 Annealing of diamond above 800 °C: encapsulation, 596
 Damage in diamond implanted at low temperatures, 569
 Diamond CVD nucleation on quartz by high dose Ti implantation, 765
 Effect of additional treatment on tribological properties of a-C coatings on metals, 1020
 Effect of surface defects on CVD diamond nucleation on 6H SiC, 261
 HT measurements of diamond thin films, 673
 Ion implantation in CVD diamond and plasma treatment effect, 575
 Ion implantation of diamond and diamond films, 862
 Ion-implanted n-type diamond: electrical evidence, 580
 Laser-induced reactive crystallization of metastable BN from Cu implanted with B^+ and N_2^+ ions, 381
 Weak optical absorption coefficients in polycrystalline diamond thin films by PDS, 684

IR absorption
 Optical and structural characterization of hydrogenated amorphous silicon carbide thin films prepared by r.f. plasma chemical vapour deposition, 1205

IR spectroscopy
 Determination of the sp^3/sp^2 ratio in a-C:H films by infrared spectrometry analysis, 1210

Isotopic effects
 H-D exchange reaction on diamond surfaces studied by diffuse reflectance FTIR, 607

Laser-assisted CVD
 Production of boron carbides by IR laser-induced gas phase reactions, 917

Laser
 Evolution of plumes produced by laser ablation of C target, 337

Laser ablation
 Photoablation of graphite target by KrF laser beam. Realisation of hard C thin films, 309

Laser-assisted PVD
 Diamond film formation by laser evaporation of highly dispersive diamond in a hydrogen plasma environment, 1200
 Growth of diamond by laser ablation of graphite, 780
 Optical and structural characterization of BN thin films, 657
 Properties of unhydrogenated DLC films deposited by ArF excimer laser, 10

Laser irradiation
 Fine patterning of diamond films by laser-assisted chemical etching in oxygen, 893
 Laser-induced reactive crystallization of metastable BN from Cu implanted with B^+ and N_2^+ ions, 381
 Modelling of self-limiting laser ablation of rough surfaces: application to polishing of diamond films, 169
 Structure and chemical composition of BN thin films grown by PLD, 370
 Tribological properties of smooth polycrystalline diamond films, 1009

Light elements in diamond
 Impurities of light elements in CVD diamond, 591

Low-pressure synthesis
 On the low-pressure synthesis of cubic boron nitride, 1193

Low substrate temperature
 Structure and mechanical properties of a-C:H films deposited onto polymer substrates, 5

Luminescence
 Direct imaging and confocal mapping of diamond films using luminescence and Raman scattering, 617

Machining
 Effect of post-deposition polishing of diamond films on machining behavior of diamond-coated cutting tools, 921

Mass spectrometry
 In-situ mass spectrometric study of gas-phase species involved in CVD of diamond as function of filament temperature, 770

Measurement technique
 Simple correlation between optical absorption and thermal conductivity of CVD diamond, 1196

Mechanical properties
 Acoustic emission on microdestruction of DLC coatings prepared by vacuum-arc deposition, 791
 Behavior of gas inclusions in diamond generated by temperature changes, 83
 Deposition of DLC film in CH_4 -He r.f. plasma, 342
 Evaluation and parametric modelling of abrasive wear resistance of ion-plated thin DLC films, 1041
 Structure and mechanical properties of a-C:H films deposited onto polymer substrates, 5
 Substrate bias effect on tribological properties of a- $Si_{1-x}C_x$:H films, 366

Membranes
 Permeable diamond membranes, 1069

Metal contacts
 XPD on Ni/diamond, Si/diamond and Au/diamond interface, 612

Metastable carbon
 Hypothetical C_{100} molecule and diamond-graphite interface: unstable and metastable states of C, 528
 Role of sodium nickelate in metastable recrystallization of diamond, 20
Metastable phase
 Laser-induced reactive crystallization of metastable BN from Cu implanted with B^+ and N_2^+ ions, 381

Methane
 Comparison between methane and acetylene as C sources for C-rich a-SiC:H films, 473

Microparticle filtering
 Graphite particles in the diamond-like a-C films prepared with the pulsed arc-discharge method, 1335

Micro-Raman spectroscopy
 Strain and microstructure variation in grains of CVD diamond film, 1222

Microstructure
 Acoustic emission on microdestruction of DLC coatings prepared by vacuum-arc deposition, 791
 Combustion synthesis: most flexible diamond synthesis process?, 243
 Electronic density of states of a-C:H films with low and high optical gaps, 897
 Indentation response of diamond thin films, 43
 Strain and microstructure variation in grains of CVD diamond film, 1222
 Thermal measurements on diamond and related materials, 809

Microstructural characterization
 Characterization of CVD diamond films by nuclear techniques with α particles, 517

Microwave discharge
 Modelling the electromagnetic field and plasma discharge in a microwave plasma diamond deposition reactor, 1145

Microwave plasma CVD
 B and H concentrations in p-type diamond films by IR spectroscopy, 469
 Bias-enhanced nucleation and heteroepitaxy of diamond on Si, 549
 Dependence of gas composition in microwave diamond PACVD reactor on inlet carbon source: CH_4 vs. C_2H_2 , 1000
 Diamond film deposition using surface wave discharges, 149
 Effects of Si substrate roughness on growth of highly oriented $\langle 100 \rangle$ diamond films, 406
 Gas-phase mechanisms in MWCVD and HFCVD diamond deposition, 256
 Growth of homoepitaxial diamond films on superpolished substrates in pulsed microwave plasma, 958
 Ion implantation in CVD diamond and plasma treatment effect, 575
 MPCVD diamond deposition on bias pretreated porous silicon, 563
 Novel technique for diamond film deposition using surface wave discharges, 149
 Prediction of feasibility of oriented diamond films by microwave PACVD, 419
 Valence-band spectra of hydrogenated diamond (111) surface, 520

Microwave plasma-enhanced CVD
 Pressure influence on diamond deposition domain from various C-H-O(-Ar)-containing gaseous mixtures, 207

Mobility
 Hall mobility and carrier concentration of B-doped homoepitaxially grown diamond (001) films, 59

Modelling
 Gas phase composition and film properties of hot filament diamond synthesis from CH_4 - H_2 - O_2 gas mixtures, 724
 Hypothetical C_{100} molecule and diamond-graphite interface: unstable and metastable states of C, 528

Indications of non-monotonic texture evolution from 2D simulation study, 416

Modelling of diamond nucleation, 903

Modelling of stress-induced diamond nucleation, 706

Morphology

- Enhanced oxidation etching of diamond films in presence of Mo by annealing in ambient atmosphere, 95
- Growth of P and N co-doped diamond films, 775

Mosaic

- Assessing polar and azimuthal correlations for an oriented mosaic of (001) diamond crystallites on (001) silicon, 1289

Mosaic diamond substrates

- Mosaic diamond substrates approaching single-crystal quality using cube-shaped diamond seeds, 76

Na, Li, P, N impurities in diamond

- Prospective n-type impurities and methods of diamond doping, 1305

Nickel impurities

- Photoinduced absorption lines related to Ni impurity in annealed synthetic diamonds, 177

Nitrogen

- Atom beam treatment of diamond films, 445
- Deposition and characterization of a-C:N thin films, 361
- N doping of ta-C, 441
- Stresses generated by impurities in diamond, 1346

n-type doping

- Prospective n-type impurities and methods of diamond doping, 1305

Non-contacting method

- Thermal diffusivity measurements by "instantaneous phase portrait" method, 1360

Nucleation

- Analysis of size distribution functions of diamond crystallites formed in the early stages of chemical vapour deposition, 1311
- Bias-enhanced nucleation and heteroepitaxy of diamond on Si, 549
- Effect of bias enhanced nucleation on the nucleation density of diamond in microwave plasma CVD, 1325
- Effect of surface defects on CVD diamond nucleation on 6H SiC, 261
- Epitaxy of diamond on Si, 394
- Optical characterization of cathode plasma sheath during biasing step for diamond nucleation on Si, 553
- Recent results in c-BN deposition in light of sputter model, 272

Nucleation and growth

- Deposition of diamond on patterned Si substrates, 930
- Diamond CVD nucleation on quartz by high dose Ti implantation, 765
- Effects of Si substrate roughness on growth of highly oriented $\langle 100 \rangle$ diamond films, 406
- Growth of homoepitaxial diamond films on superpolished substrates in pulsed microwave plasma, 958
- In situ optical investigations of diamond thin films growth on Mo substrates, 750
- MPCVD diamond deposition on bias pretreated porous Si, 563
- Nucleation layers for high-quality diamond CVD from r.f. plasma, 735
- Nucleation of c-BN with ion-induced PECVD, 375
- Production of polycrystalline diamond films by d.c. glow discharge CVD, 964

Nucleation enhancement methods

- Studies on nucleation process in diamond CVD: an overview of recent developments, 1173

Nucleation mechanisms

- Studies on nucleation process in diamond CVD: an overview of recent developments, 1173

Optical defect centers

- Dynamical processes of 2.818 eV centre in diamond, 26
- H-related IR absorption in CVD diamond, 652
- Slow emission of 2.56 eV centre in synthetic diamond, 53

Optical properties

- Effect of mechanical stress on absorption band tail in polycrystalline diamond films, 122
- In situ optical investigations of diamond thin films growth on Mo substrates, 750
- Properties of diffused diamond films with n-type conductivity, 877
- Spectral ellipsometric and compositional characterization of a-SiC:H thin films, 702
- Uniaxial stress and Zeeman splitting of the 1.681 eV optical center in a homoepitaxial CVD diamond film, 1189

Optimal cutting conditions

- Quantitative measurement of temperatures on diamond-coated tools during machining, 1216

Optoelectronic properties

- Photoyield measurements of CVD diamond, 806
- Spatially resolved photocurrent measurements on a-C:H/c-Si and a-C:H/a-Si:H heterojunction photodiodes, 692
- Structural and optoelectronic properties of C-rich a-SiC:H films, 357

Orientation

- Effects of Si substrate roughness on the growth of highly oriented $\langle 100 \rangle$ diamond films, 406
- Substantial effect of linear velocity of combustion flame on oriented growth of diamond, 186

Oriented growth

- Substantial effect of linear velocity of combustion flame on oriented growth of diamond, 186

Oxidation behavior

- Annealing of diamond above 800 °C:Si₃N₄ encapsulation, 596
- Enhanced oxidation etching of diamond films in presence of Mo by annealing in ambient atmosphere, 95
- Fine patterning of diamond films by laser-assisted chemical etching in oxygen, 893
- TiN as interlayer for diamond deposition on steel, 1088

Oxygen

- F₂, H₂O, and O₂ etching rates of diamond and the effects of F₂, HF and H₂O on the molecular O₂ etching of (110) diamond, 1317

Passivation

- I/V characteristics of epitaxial Schottky Au barrier diode on p⁺ diamond substrate, 661

PECVD

- Nucleation of c-BN with ion-induced PECVD, 375

Phase diagram

- Formation of c-BN in Mg₃N₂-BN: new contribution to phase diagram, 1046
- New concept of BN phase diagram: an applied aspect, 1
- On the low-pressure synthesis of cubic boron nitride, 1193
- Thermal properties of C/H-, C/H/O-, C/H/N- and C/H/X-grown polycrystalline CVD diamond, 820

Phase identification

- Influence of temperature on the structure of SiC coatings prepared by dynamic ion mixing, 1340

Phonon scattering

- Relation between HFCVD diamond growth rate, line-width of Raman spectrum and particle size, 464

Phosphorus
Influence of P addition on diamond CVD, 133

Photochemical modification
Photoluminescence of $\langle 100 \rangle$ textured CVD diamonds, 425
Properties of photochemically modified diamond films, 435

Photoconductivity
Photoconductivity of natural diamonds, 688

Photoluminescence
Dynamical processes of 2.818 eV centre in diamond, 26
Impurities of light elements in CVD diamond, 591
Photoluminescence of $\langle 100 \rangle$ textured CVD diamonds, 425
Slow emission of 2.56 eV centre in synthetic diamond, 53
Uniaxial stress and Zeeman splitting of the 1.681 eV optical center in a homoepitaxial CVD diamond film, 1189

Photoelectrical effects
Photoelectrical effects in heterostructures based on HF CVD diamond films, 1061

Physical vapour deposition
DLC multilayer coatings for wear protection, 936

Plasma-assisted CVD
In situ Raman monitoring of growth of diamond films in PACVD, 745
Interfacial shear strength of DLC coatings deposited on metals, 787
Surface vibrational studies of CVD diamond, 600

Plasma diagnostics
Absolute density of the argon first excited states in plasmas used for carbon deposition as determined by absorption spectroscopy, 1271
Absorption spectroscopy measurements of atomic and molecular C population densities in expanding thermal arc plasma, 908
Influence of plasma parameters on properties of diamond films deposited by d.c. arc technique, 33
Optical characterization of cathode plasma sheath during biasing step for diamond nucleation on Si, 553
Optical emissions during PACVD of DLC films, 69

Plasma etching
Dry etching of undoped and B doped polycrystalline diamond films, 456

Plasma jet
Effects of electrode arrangement and pressure on synthesis of diamond films by arc discharge plasma jet chemical vapor deposition, 1363
Emission spectroscopy diagnostics of d.c. plasma jet diamond reactor, 350
Influence of addition of CF_4 on deposition of a-C : H layers using expanded thermal plasma, 328

Plasma jet CVD
Absorption spectroscopy measurements of atomic and molecular C population densities in expanding thermal arc plasma, 908
Characterization and adhesion strength of diamond films deposited on silicon nitride inserts by d.c. plasma jet chemical vapour deposition, 1260
Deposition of DLC film in $\text{CH}_4\text{-He}$ r.f. plasma, 342
Measurement of electron energy distribution functions in methane-hydrogen plasmas, 524

Plasma modelling
Modelling the electromagnetic field and plasma discharge in a microwave plasma diamond deposition reactor, 1145

Plasma treatment
Ion implantation in CVD diamond and plasma treatment effect, 575
XPS of plasma-treated surfaces of diamond films, 984

Polycrystalline diamond
Effect of mechanical stress on absorption band tail in polycrystalline diamond films, 122

Polycrystalline diamond films
Characterization of CVD diamond films by nuclear techniques with α particles, 517
Dry etching of undoped and B doped polycrystalline diamond films, 456
Electrical properties of B-doped diamond films after annealing, 451
Electrical properties of polycrystalline diamond films on Si, 628
HT pressure sensor using p-type diamond piezoresistors, 873
Indications of non-monotonic texture evolution from 2D simulation, 416
Modelling of self-limiting laser ablation of rough surfaces: application to polishing of diamond films, 169
Photoelectrical effects in heterostructures based on HF CVD diamond films, 1061
Potential high-strength high thermal conductivity metal-matrix composites based on diamond fibres, 848
Production of polycrystalline diamond films by d.c. glow discharge CVD, 964
Properties of photochemically modified diamond films, 435
Substantial effect of linear velocity of combustion flame on oriented growth of diamond, 186
The influence of differences in gas phase between turbulent and laminar acetylene-oxygen combustion flames on diamond growth, 1113

Polytypes
Thermodynamic analysis of phase transformations at the dissociative evaporation of silicon carbide polytypes, 1331

Positron annihilation
Structural characterization of a-C : H and a- CN_x : H film deposited by PECVD, 499

Post-deposition polishing
Effect of post-deposition polishing of diamond films on machining behavior of diamond-coated cutting tools, 921

Pressure
Effects of electrode arrangement and pressure on synthesis of diamond films by arc discharge plasma jet chemical vapor deposition, 1363

Pretreated substrates
Modelling of stress-induced diamond nucleation, 706

Processing-microstructure relation
Capabilities of plasma beam discharge for formation of DLC films, 120
Modelling of self-limiting laser ablation of rough surfaces: application to polishing of diamond films, 169

Plasma beam discharge
Plasma beam discharge for formation of DLC films, 120
Prediction of feasibility of oriented diamond films by microwave PACVD, 419

Prostheses
New medical material based on metastable form of carbon, 1142

Pulsed arc-discharge method
Graphite particles in the diamond-like a-C films prepared with the pulsed arc-discharge method, 1335

Quartz substrate
Diamond CVD nucleation on quartz by high dose Ti implantation, 765

r.f. PCVD
The corrosion tests of amorphous carbon coatings deposited by r.f. dense plasma onto steel with different chromium contents, 1251

R.f. plasma CVD
Deposition of DLC film in $\text{CH}_4\text{-He}$ r.f. plasma, 342
Deposition of ta-C : H films by r.f. plasma discharges, 304
Manufacture of a-C layers by r.f. dense plasma CVD, 302

Nucleation layers for high-quality diamond CVD from r.f. plasma, 735

Optical and structural characterization of BN thin films, 657

Optical emissions during PACVD of DLC films, 69

Quantitative measurements of atomic H during deposition of DLC films, 324

Substrate bias effect on tribological properties of a-Si_{1-x}C_x:H films, 366

Radical species

- Evolution of plumes produced by laser ablation of C target, 337
- Micro-Raman for diamond films stress analysis, 460
- Relation between HFCVD diamond growth rate, line-width of Raman spectrum and particle size, 464
- Structural changes in doped a-C:H films during annealing, 482
- Structural characterization of a-C:H and a-CN_x:H films deposited by PECVD, 499
- Structure and chemical composition of BN thin films grown by PLD, 370

Raman spectroscopy

- Analysis of the fine structure of the Raman line and of X-ray reflection profiles for textured CVD diamond films, 1243
- Chemical and morphological modifications of Si wafers treated by ultrasonic impacts of powders, 759
- Comparative study of microcrystalline diamond, 968
- CVD diamond films on bio-medical ceramics, 798
- Direct imaging and confocal mapping of diamond films using luminescence and Raman scattering, 617
- Evolution of density of graphite-like defects during CVD diamond growth, 972
- Growth of diamond by laser ablation of graphite, 780
- In situ Raman monitoring of growth of diamond films in PACVD reactors, 745
- Micro-Raman for diamond films stress analysis, 460
- Pressure influence on diamond deposition domain from various C-H-O(-Ar)-containing gaseous mixtures, 207
- Optical and electrical characterization of B-doped diamond films, 678
- Optical and structural characterization of hydrogenated amorphous silicon carbide thin films prepared by r.f. plasma chemical vapour deposition, 1205
- Properties of unhydrogenated DLC films deposited by ArF excimer laser, 19
- Relation between HFCVD diamond growth rate, line-width of Raman spectrum and particle size, 464
- Stress measurement of CVD diamond films, 837
- Structure and chemical composition of BN thin films grown by PLD, 370
- Structural changes in doped a-C:H films during annealing, 482
- Structural characterization of a-C:H and a-CN_x:H films deposited by PECVD, 499

Reactive ion plasma

- Deposition by reactive ion-plasma sputtering and characterization of C-N thin films, 390

Recent developments

- Studies on nucleation process in diamond CVD: an overview of recent developments, 1173

Scanning electron microscopy

- Electrical, thermal, and optical properties of CVD diamond films by SM techniques, 645
- Growth of diamond by laser ablation of graphite, 780
- Modelling of self-limiting laser ablation of rough surfaces: application to polishing of diamond films, 169
- Production of polycrystalline diamond films by d.c. glow discharge CVD, 964

Scanning tunnelling microscopy

- Electrical, thermal, and optical properties of CVD diamond films by SM techniques, 645
- Study of antiphase boundaries and local 3 × 1 configuration on the (001) surface of homoepitaxial diamond films by scanning tunnelling microscopy, 1371

Schottky diode

- Electrical properties of polycrystalline diamond films on Si, 628

Seeding

- Analysis of size distribution functions of diamond crystallites formed in the early stages of chemical vapour deposition, 1311

Selective diamond growth

- MPCVD diamond deposition on bias pretreated porous Si, 563

Semiconductor

- Gap states, doping and bonding in ta-C, 637

Shock

- C₃N₄ or bust, 1093

Silicon carbide

- Deformation of N doped cubic polytype SiC, 784
- Effect of surface defects on CVD diamond nucleation on 6H SiC, 261
- Formation of epitaxial diamond-SiC heterojunctions, 632
- Influence of temperature on the structure of SiC coatings prepared by dynamic ion mixing, 1340
- Local distribution of SiC formed by diamond heteroepitaxy on Si studied by IR spectroscopy, 944
- Optical and structural characterization of hydrogenated amorphous silicon carbide thin films prepared by r.f. plasma chemical vapour deposition, 1205
- Spectral ellipsometric and compositional characterization of a-SiC:H thin films, 702
- Thermodynamic analysis of phase transformations at the dissociative evaporation of silicon carbide polytypes, 1331

Silicon-carbon films

- Structural and optoelectronic properties of C-rich and a-SiC:H films, 357

Silicon substrates

- Deposition of diamond on patterned Si substrates, 930

SiN inserts

- Characterization and adhesion strength of diamond films deposited on silicon nitride inserts by d.c. plasma jet chemical vapour deposition, 1260

Single crystals

- Mosaic diamond substrates approaching single-crystal quality using cube-shaped diamond seeds, 76
- Step-related growth phenomena on exact and misoriented {001} surfaces of CVD-grown single-crystal diamonds, 250

Size distribution function

- Analysis of size distribution functions of diamond crystallites formed in the early stages of chemical vapour deposition, 1311

Solution growth

- Deposition of ta-C:H films by r.f. plasma discharges, 304
- Formation of ta-C:H, 268
- Role of sodium nickelate in metastable recrystallization of diamond, 20

sp² Bonding

- Comparison of bulk and surface structure in a-C:H films, 996
- Electronic density of states of a-C:H films with low and high optical gaps, 897
- Formation of ta-C:H, 268
- Network connectivity and structural defects in a-C:H films, 492
- Step-related growth phenomena on exact and misoriented {001} surfaces of CVD-grown single-crystal diamonds, 250

sp³ Bonding
 Comparison of bulk and surface structure in a-C:H films, 996
 Deposition of ta-C:H films by r.f. plasma discharges, 304

sp³/sp² determination
 Determination of the sp³/sp² ratio in a-C:H films by infrared spectrometry analysis, 1210

Spectroscopy
 Absolute density of the argon first excited states in plasmas used for carbon deposition as determined by absorption spectroscopy, 1271
 Absorption spectroscopy measurements of atomic and molecular C population densities in expanding thermal arc plasma, 908
 Evolution of plumes produced by laser ablation of C target, 337
 Valence-band spectra of hydrogenated diamond (111) surface, 520

Sputtering
 DLC multilayer coatings for wear protection, 936
 Optical and structural characterization of BN thin films, 657
 Preparation of thin hard BN films by r.f. magnetron sputtering, 113
 Recent results in c-BN deposition in light of sputter model, 272

Step-controlled epitaxy

Strain
 Strain and microstructure variation in grains of CVD diamond film, 1222
 Formation of ta-C:H, 268

Strengthening of diamond
 Stresses generated by impurities in diamond, 1346

Stress
 Behavior of gas inclusions in diamond generated by temperature changes, 83
 Comparative study of microcrystalline diamond, 968
 Diamond deposition on steel with CVD W intermediate layer, 754,
 Micro-Raman for diamond film stress analysis, 460
 Modelling of stress-induced diamond nucleation, 706
 R.f. ion plating-induced phase transition from h-BN to nanocrystalline c-BN, 288
 Stress measurement of CVD diamond films, 837
 Stresses generated by impurities in diamond, 1346

Stress relief
 Optical emissions during PACVD of DLC films, 69

Structural characterization
 Deformation of N doped cubic polytype SiC, 784
 Nucleation during deposition of hydrocarbon ions as function of substrate temperature, 333
 Preparation of thin hard BN films by r.f. magnetron sputtering, 113
 Structural characterization of a-C:H and a-CN_x:H nitride films deposited by PECVD, 499
 The behaviour of the molybdenum–CVD diamond interface at high temperature, 1137

Structure calculations
 Structure models of a-C and a-C:H, 297

Substrate bias
 Bias-enhanced nucleation and heteroepitaxy of diamond on Si, 549
 Deposition of diamond on patterned Si substrates, 930
 Modelling of diamond nucleation, 903
 Optical characterization of cathode plasma sheath during biasing step for diamond nucleation on Si, 553

Substrate preparation
 Chemical and morphological modifications of Si wafers treated by ultrasonic impacts of powders, 759
 Growth of well-adhering diamond coating on sintered W, 1079
 MPCVD diamond deposition on bias pretreated porous Si, 563

Negative electron affinity effects on H plasma exposed diamond (100) surfaces, 802

Substrate temperature
 Substrate temperature measured by film-on-plate thermocouple during diamond growth using combustion flame technique, 1056

Superhard
 C₃N₄ or bust, 1093

Surface
 Dry etching of undoped and B doped polycrystalline diamond films, 456
 Photoyield measurements of CVD diamond, 806

Surface characterization
 Comparison of bulk and surface structure in a-C:H films, 996
 Negative electron affinity effects on H plasma exposed diamond (100) surfaces, 802
 Optical second-harmonic generation on diamond C(111) surface, 544
 Step-related growth phenomena on exact and misoriented {001} surfaces of CVD-grown single-crystal diamonds, 250
 Valence band spectroscopy of reconstructed (100) and (111) natural diamond, 539
 Valence-band spectra of hydrogenated diamond (111) surface, 520
 XPD on Ni/diamond, Si/diamond and Au/diamond interface, 612

Surface chemistry
 Formation of CH₂ species during diamond CVD, 740
 Halogenation of carbon surfaces by atomic beams: HOPG graphite, 216
 H–D exchange reaction on diamond surfaces studied by diffuse reflectance FTIR, 607
 Optical second-harmonic generation on diamond C(111) surface, 544

Surface energy
 Surface reconstructions of c-BN(001) N-rich surface, 532

Surface Fermi level
 XPS of plasma-treated surfaces of diamond films, 984

Surface sites
 Surface interactions on B implanted into diamond, 145

Surface structure
 Surface reconstructions of c-BN(001) N-rich surface, 532
 Surface vibrational studies of CVD diamond, 600

Synthetic diamond
 Diamond formed at low pressures and temperatures through liquid-phase hydrothermal synthesis, 234
 H-related IR absorption in CVD diamond, 652
 Photoinduced absorption lines related to Ni impurity in annealed synthetic diamonds, 177

Temperatures
 Quantitative measurement of temperatures on diamond-coated tools during machining, 1216

Tetrahedral amorphous carbon
 Magnetic and spin properties of ta-C, 912

Texture analysis
 Analysis of the fine structure of the Raman line and of X-ray reflection profiles for textured CVD diamond films, 1243

Texture development
 Indications of non-monotonic texture evolution from 2D simulation, 416
 Influence of growth process on film texture of epitaxially nucleated diamond on Si(001), 410
 Prediction of feasibility of oriented diamond films by microwave PACVD, 419

Thermal conductivity

- Potential high-strength high thermal conductivity metal-matrix composites based on diamond fibres, 848
- Simple correlation between optical absorption and thermal conductivity of CVD diamond, 1196
- Thermal properties of a-C:H films via mirage effect measurements, 954
- Thermal properties of C/H-, C/H/O-, C/H/N- and C/H/X-grown polycrystalline CVD diamond, 820

Thermal diffusivity

- Thermal diffusivity measurements by "instantaneous phase portrait" method, 1360
- Thermal properties of a-C:H films via mirage effect measurements, 954

Thermal properties

- Electrical, thermal, and optical properties of CVD diamond films by SM techniques, 645
- Thermal measurements on diamond and related materials, 809

Thermal stability

- Thermal stability of DLC, 191

Thermocouple

- Substrate temperature measured by film-on-plate thermocouple during diamond growth using combustion flame technique, 1056

Thermodynamics

- Comparative aspects of c-BN and diamond CVD, 714
- Thermodynamic analysis of phase transformations at the dissociative evaporation of silicon carbide polytypes, 1331

Thromboresistance

- New medical material based on metastable form of carbon, 1142

Tool coatings

- CVD of diamond onto Fe based substrates, 710
- Growth of well-adhering diamond coating on sintered W, 1079

Transmission electron microscopy

- Modelling of diamond nucleation, 903
- R.f. plasma-assisted deposition of DLC films from methanol-water vapour mixture, 15

Tribological properties

- Substrate bias effect on tribological properties of a-Si_{1-x}C_x:H films, 366

Tribology

- DLC multilayer coatings for wear protection, 936
- Mechanical properties of C metal multilayered films, 843
- Tribology of carbon coatings: DLC, diamond and beyond, 827
- Tribological properties of smooth polycrystalline diamond films, 1009

Twining

- Influence of growth process on film texture of epitaxially nucleated diamond on Si(001), 410

Ultrasonic measurement

- Acoustic emission on microdestruction of DLC coatings prepared by vacuum-arc deposition, 791

UV range

- Theoretical aspects of diamond films and laser action, 1376

Vapour growth

- Thermal properties of C/H-, C/H/O-, C/H/N- and C/H/X-grown polycrystalline CVD diamond, 820

Vibrational spectroscopy

- Network connectivity and structural defects in a-C:H films, 492
- H-D exchange reaction on diamond surfaces studied by diffuse reflectance FTIR, 607

Volume stress

- Theoretical aspects of diamond films and laser action, 1376

Wear

- Effect of additional treatment on tribological properties of a-C coatings on metals, 1020
- NEXAFS characterization of ion-beam-assisted carbon-sputtered thin films, 200

X-ray absorption

- NEXAFS characterization of ion-beam-assisted carbon-sputtered thin films, 200

X-ray diffraction

- Deformation of N doped cubic polytype SiC, 784
- Multilayer diamond-like structures for X-ray optics, 109
- R.f. plasma-assisted deposition of DLC films from methanol-water vapour mixture, 15
- Stress measurement of CVD diamond films, 837
- Substrate temperature measured by film-on-plate thermocouple during diamond growth using combustion flame technique, 1056

X-Ray emission spectrum

- Study of chemical bonds in carbon and boron materials by EPMA, 1383

X-ray photoelectron spectroscopy

- N implantation into glassy carbon to grow C₃N₄ thin films, 292
- XPS of plasma-treated surfaces of diamond films, 984

X-ray scattering

- Assessing polar and azimuthal correlations for an oriented mosaic of (001) diamond crystallites on (001) silicon, 1289

Young's modulus

- Indentation response of diamond thin films, 43

